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INTRODUCTION

In 2006, the Washington State Legislature passed the Commute Trip Reduction (CTR) Efficiency Act which requires local governments in those counties experiencing the greatest automobile-related air pollution and traffic congestion to develop and implement plans to reduce drive alone trips and vehicle miles traveled (VMT). The CTR Efficiency Act builds upon the successful 1991 CTR law that

requires major employers to implement trip reduction programs.



Jurisdictions experiencing the greatest traffic congestion are required to participate in the CTR Efficiency Act.

Under the CTR Efficiency Act, jurisdictions are required to develop new CTR plans and establish program goals and targets for their urban growth areas. Jurisdictions have more flexibility in setting goals for their major employers and developing a plan that is tailored to meet their needs. The CTR plans are intended to be consistent with a jurisdiction's existing comprehensive plan. The CTR Efficiency Act does not require jurisdictions to amend their local comprehensive plans. Changes to the local comprehensive plans are up to the discretion of the local jurisdiction. However, through the CTR planning process, jurisdictions may identify areas of their comprehensive plans that they want to change so that the plan is more supportive of CTR.

Jurisdictions also have the opportunity to designate an area as a Growth and Transportation Efficiency Center (GTEC). GTECs are urban areas of the state that contain a concentration of jobs and/or population. For an area to qualify as a GTEC, it must meet land use and transportation criteria established by the regional transportation planning organization (RTPO) during the regional CTR planning process. Additional state funding may be available for those jurisdictions that choose to designate a GTEC.

This guide has been prepared to help jurisdictions update their CTR plans in accordance with RCW 70.94.521. The CTR Plan is a collection of goals and policies, facility and service improvements, and marketing strategies that support reducing drive alone trips and vehicle miles traveled by 2011. It also describes requirements for major employers, documents the public involvement process, presents a sustainable financing plan, and lays out the implementation structure for the CTR program.

This guide is based on the CTR law and the CTR rules established by the Washington State Department of Transportation (WSDOT). To refer to the CTR Efficiency Act legislation and CTR rules, please see Appendices A and B.

To review the CTR Efficiency Act legislation and the CTR rules, please see Appendices A and B.

BACKGROUND OF THE COMMUTE TRIP REDUCTION EFFICIENCY ACT

The Washington State Legislature passed the Commute Trip Reduction (CTR) law in 1991, incorporating it into the Washington Clean Air Act. The goals of the CTR program are to reduce traffic congestion, reduce air pollution, and reduce petroleum consumption through employer-based programs that decrease the number of commute trips made by people driving alone.

In response to Washington's rapid growth, in 1990, the Washington State Legislature passed the Growth Management Act (GMA). According to the Act, "uncoordinated and unplanned growth, together with a lack of common goals ... pose a threat to the environment, sustainable economic development, and the health, safety, and high quality of life enjoyed by the residents of this state. It is in the public interest that citizens, communities, local governments, and the private sector cooperate and coordinate with one another in comprehensive land use planning."¹ This is the foundation for the Growth Management Act. State and local policies for dealing with growth and the relationship of land use and transportation on a planning level are embodied in it.



A basic principle of GMA is to direct growth in urban areas while protecting critical areas and preserving natural resource lands.

The GMA embraced the idea that planning on the local level should integrate land use planning and development with transportation infrastructure planning and development. The basic principle of the GMA is to limit urban development to designated urban growth areas (UGAs), while protecting critical areas and preserving natural resource lands.

As the state's population and economic activity have grown, so has traffic congestion. During peak travel periods around the state, demand for the state highway system frequently exceeds capacity, causing congestion for commuters, travelers and interstate commerce. This congestion dramatically reduces the efficiency of the state's transportation system.

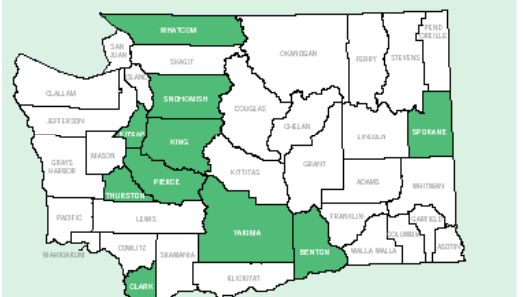
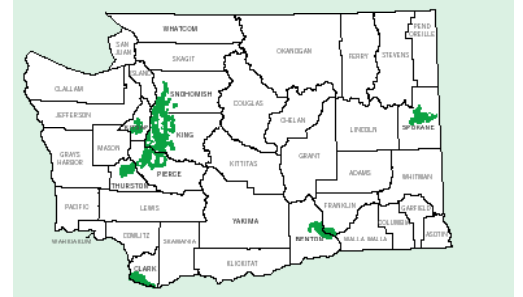
In an effort to improve the efficiency and carrying capacity of the state transportation system, the Washington State Legislature amended the CTR law in 2006 by passing the CTR Efficiency Act. The updated law focuses CTR where it can be most effective: in the UGAs around the state containing the most congested highway segments.

The 2006 CTR law affects the state's nine most populated counties and the cities within those counties. These local jurisdictions are required to adopt updated CTR ordinances and support local employers in implementing CTR. Employers in these counties are required to participate in CTR if they have 100 or more full-time employees at a single worksite who begin their scheduled workday between 6 a.m. and 9 a.m. Employers are required to develop a commuter program

¹ RCW 36.70A.010

BACKGROUND OF THE COMMUTE TRIP REDUCTION EFFICIENCY ACT

designed to achieve reductions in vehicle trips and vehicle miles traveled and offer benefits such as subsidies for transit fares, flexible work schedules, telework opportunities.

Counties of the State Required to Participate in the CTR Program	Urban Growth Area Required to Participate in the CTR Program by on Traffic Congestion
 <p>Source: WSDOT.</p>	 <p>Source: WSDOT.</p>

Each of the cities and counties required to plan under the CTR law are also required to plan extensively under GMA (the Tri-Cities is exempted from the requirements of CTR for two years). The CTR Efficiency Act requires these CTR-affected cities and counties to develop CTR plans that are consistent with their planning under GMA, so that the two efforts support and complement each other.

MAKING THE CONNECTION BETWEEN COMMUTE TRIP REDUCTION AND THE GROWTH MANAGEMENT ACT

One of the major goals of the Commute Trip Reduction (CTR) Efficiency Act is to ensure that the local CTR program goals and targets help jurisdictions achieve their broader transportation and land use goals. Jurisdictions in turn then develop services, regulations, policies and programs that support the trip reduction investments of major employers. This can be achieved by coordinating the local CTR plan with the local and regional transportation and land use plans.

The Growth Management Act was passed in 1990 with thirteen goals to guide the development and adoption of comprehensive plans and development regulations. Two of the GMA goals are to discourage sprawling development and encourage efficient transportation systems. To achieve these goals, jurisdiction planners have been exploring new and creative approaches to land use and transportation issues to meet the demands of dynamic population growth in Washington State.

One strategy that some communities have adopted to manage the impacts of growth on their transportation systems and land uses is to encourage “transportation-efficient land use” policies. “Transportation-efficient land use” is a term that refers to a built environment that supports non-drive alone transportation options such as carpools, vanpools, transit, walking and bicycling. Some communities have found this to be an effective approach that provides greater transportation access by offering more ways for people to move around.



The City of Renton has a goal to increase the use of public transportation.

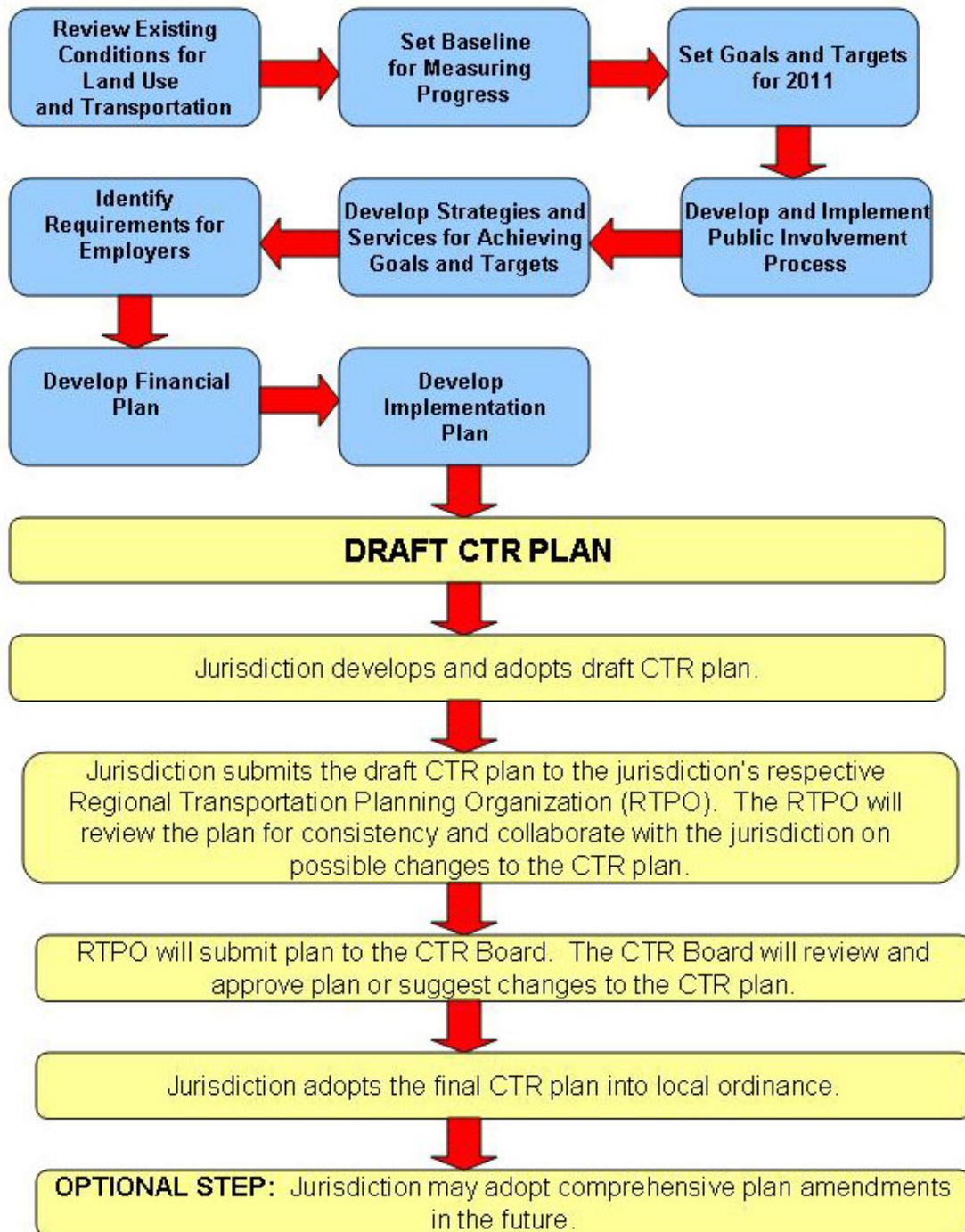
Recognizing that GMA and the CTR program share similar goals, jurisdictions are encouraged coordinate their CTR plans with their land use and transportation plans to make them both more effective. By focusing on employers, the CTR program helped to reduce the number of automobile trips in congested areas and increased awareness of alternative travel options. As a result, the jurisdiction achieves its goals for improving air quality and conserving energy.

In the past, CTR focused on employer activities but was often disconnected from the planning that jurisdictions performed. By making the connection between the CTR program and comprehensive planning, the CTR plan implements the jurisdiction’s land use and transportation goals and policies to create a transportation efficient land use plan. This is the primary benefit of the coordination between GMA and CTR.

CTR PLANNING AND APPROVAL PROCESS

The Commute Trip Reduction (CTR) Program rules specify the process for developing and adopting the CTR plans. Listed below are the required steps to develop and adopt the CTR plans:

PROCESS FOR DEVELOPING CTR PLANS



HOW TO USE THIS GUIDE

This guide provides assistance to cities and counties that are required to prepare CTR plans in accordance with RCW 70.94.521. WSDOT will notify those cities and counties that are required to prepare a plan. The required elements of the plan are based on the *Commute Trip Reduction Rules for Preparing Local CTR Plans*. By preparing a successful CTR plan, the jurisdiction will achieve the following:

- Meet the goals and objectives of the CTR Efficiency Act
- Create a CTR plan that supports local comprehensive plan goals and policies
- Create a functional and sustainable framework for implementing the CTR program

This guide provides a series of planning steps that are meant to help your jurisdiction think about their key CTR-related issues. As you read through the suggested approach for preparing your CTR plan, the guide indicates which steps will be necessary to develop a valid CTR plan, and which steps are optional to take. These optional steps, if chosen, can help develop a more robust CTR plan with greater benefits.

Sections, or required elements, of the plan include the following:

Section I:	Land Use and Transportation Context
Section II:	Setting the Baseline and Measuring Progress
Section III:	Goals and Targets for 2011
Section IV:	Description of Planned Local Services and Strategies for Achieving the Goals and Targets
Section V:	Contributions for Major Employers
Section VI:	Documentation of Consultation
Section VII:	A Sustainable Financial Plan
Section VIII:	Implementation Structure
Section IX:	Growth and Transportation Efficiency Centers
Section X:	OPTIONAL: How to Estimate the Benefits of the CTR Program

Technical assistance for preparing CTR plans is available from the local regional transportation planning organization and WSDOT. For a list of contacts, please see Appendix D.

Acronyms Used in This Guide:

CTR:	Commute Trip Reduction
FAR:	Floor Area Ratio
GTEC:	Growth and Transportation Efficiency Center
RTPO:	Regional Transportation Planning Organization
TDM:	Transportation Demand Management
TOD:	Transit Oriented Development
VMT:	Vehicle Miles Traveled

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

The purpose of this section is to assess the existing and planned land use and transportation conditions that support CTR-affected work sites. The assessment should identify barriers that prevent the work site from achieving its CTR goals. Barriers may include lack of sidewalks, bicycle lanes, transit service, transit stops and/or employment density to support successful transit, non-motorized or ridesharing activities, and too much free and abundant parking.

After identifying the potential barriers, jurisdictions should identify potential steps that they can take to rectify the situation. Some of these solutions may already be described in their comprehensive plans. Jurisdictions must also review their comprehensive plan policies and coordinate their CTR planning with their RTPO and neighboring jurisdictions. In Section IV of their CTR plan, the jurisdiction will need to identify the specific steps it will take to help the CTR work sites, or work site cluster, attain their CTR goals.

Because jurisdictions regularly update their land use and transportation system plans, they should not need to expend a large amount of effort collecting information that is needed to assess the conditions of their CTR work sites or work site cluster. Jurisdictions should use the information already contained in their comprehensive plans.

While jurisdictions can obtain the majority of the information for this section from their comprehensive plans, they are encouraged to contact their RTPO, transit agencies, major employers, advocacy groups and other interested parties to obtain additional information. These groups may be able to provide information and insights that the jurisdictions currently do not have.

Although jurisdictions are only required to assess the conditions for their CTR work sites, or work site cluster, they may want to take a broader look at their existing and planned land uses and transportation system so that they can evaluate more effectively how well their jurisdiction can attain a more efficient transportation system and transportation-efficient land uses.

HINT:

For a list of RTPO, transit agency and advocacy group contacts and available information, please see Appendix C.

Listed below are the following steps that jurisdictions should take to prepare their assessments of land use and transportation conditions at CTR work sites or work site cluster. If a jurisdiction has multiple work sites that are in the same vicinity, they can cluster the work sites and perform the assessment for the cluster. **Steps 1 through 5 are steps that jurisdictions will need to take in order to develop a valid CTR plan.** Step 6 is an optional step that jurisdictions may want to pursue in the future to help them strengthen their CTR program over time.

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

REQUIRED STEPS

Step 1. *Identify the Locations of the CTR Work Sites or Work Site Cluster and Evaluate the Surrounding Area*

Jurisdictions should identify the locations of their CTR-affected work sites and prepare an analysis of each site and its surrounding area. It is recommended that jurisdictions inventory the land use and transportation conditions within a half-mile boundary surrounding the work site or work site cluster.

To assist jurisdictions with their analysis, it is suggested that they prepare a GIS analysis of the CTR work sites or work site cluster. The purpose of this step is to prepare GIS (or other types of maps) that graphically illustrate the spatial relationship of all significant internal and external destinations. WSDOT can assist jurisdictions by providing the geocodes of CTR work site, or work site cluster, locations. By using GIS to identify the locations of the CTR work sites, or work site cluster, the jurisdiction can compare the locations of the CTR work sites, or work site cluster, with their land use and transportation facilities and perform their analysis. To create a useful GIS map:

- Create a base map of your jurisdiction: roads, lots, zoning districts
- Overlay the following GIS data sets over the base map:
 - ✓ Locations of CTR work sites, or work site cluster
 - ✓ Existing transit routes
 - ✓ Transit connections (i.e., transit centers, stops, park and ride lots)
 - ✓ Commuter Rail connections
 - ✓ Sidewalks and bicycle lanes



Bike lanes are an important transportation system element.

HINT:

For an example of how GIS can be used to analyze CTR work sites or work site cluster, please see Appendix D.

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

Step 1a. *Prepare an Inventory of Existing and Planned Transportation Facilities Near the CTR Work Site or CTR Work Site Cluster*

After identifying the locations of CTR work sites or work site cluster, the jurisdiction is encouraged to prepare an inventory of its transportation facilities near the CTR work sites or work site cluster. This step will help the jurisdiction to understand how the transportation system affects the CTR work sites or work site cluster. The jurisdiction's transportation system contains a network of local, regional and state facilities. The inventory should focus on existing and planned facilities and programs that support all commute modes including transit, vanpooling, carpooling, bicycling and walking. By understanding the jurisdiction's transportation system, it can identify effective strategies that will help their CTR work sites or work site cluster.

Jurisdictions are encouraged to evaluate only the most critical transportation issues that affect a CTR work site or work site cluster for being successful in meeting their goals. Information that may be useful for the jurisdiction's analysis includes:

- ✓ Local and regional street network connectivity
- ✓ State transportation facilities
- ✓ High occupancy vehicle (HOV) facilities
- ✓ Bicycle and pedestrian facilities
- ✓ Transit signal priority equipment
- ✓ Transportation demand management programs

HINT:

For a more detailed description on how to analyze a jurisdiction's transportation system and conduct a needs assessment, please see Appendix E.

Step 1b. *Prepare an Inventory of Existing and Planned Transit Services Affecting the Individual CTR Work Sites or CTR Work Site Cluster*

Public transportation plays a key role in reducing drive alone trips, especially if it offers service to commuters that is competitive to the private automobile in terms of travel time, reliability, and cost. Jurisdictions are encouraged to contact their transit agency to obtain information on existing public transportation services within the jurisdiction and to identify potential opportunities for more supportive transit service. Transit agencies are responsible for making decisions about transit services and can provide information to the jurisdiction to assist them in their analysis. Information that will be helpful in the assessment includes:

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

- ✓ Who are the current transit providers for the CTR work site or work site cluster?
- ✓ What type of transit service (i.e., bus fixed route, demand response, commuter or light rail, route deviation) is offered near the CTR work site or work site cluster?
- ✓ How many routes operate near the CTR work site or work site cluster?
- ✓ What is the frequency of service for the CTR work site or work site cluster?
- ✓ What is the span of service (days and hours) for the CTR work site or work site cluster?
- ✓ Where are the nearest transit facilities (park and ride lots, transit centers) relative to the CTR work site or work site cluster?
- ✓ Does the transit provider offer vanpool services? If yes, describe the current program.
- ✓ Does the jurisdiction have any transit related policies that support CTR?

This section of the CTR plan should also review the transit related policies that are currently included in the jurisdiction's comprehensive plan or other relevant plans, such as a local transit plan, that are consistent with reducing drive alone trips and VMT. The jurisdiction may consider adding transit related policies to its comprehensive plan to support its CTR program.



Vanpools are an effective CTR program strategy.

HINT:

For a more detailed description on how to analyze a jurisdiction's transit system and conduct a needs assessment, please see Appendix F.

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

Step 1c. *Review Existing Parking Policies and Regulations for the CTR Work Site or CTR Work Site Cluster*

Parking policies and regulations can heavily influence a person's mode choice. For example, an abundance of free parking that is always available to a commuter encourages them to drive alone. The jurisdiction should examine the supply of parking at or near the CTR work sites or clusters of CTR work sites. It should also examine the parking regulations for parking supply requirements for new development and on-street parking. An assessment of current policies and regulations should include the following:

- ✓ Does your jurisdiction impose a maximum number of spaces for a new development at the work site or work site cluster?
- ✓ Does the area around the CTR work site or work site cluster have on-street parking regulations?
- ✓ For areas that have on-street parking regulations, what are the regulations and what devices are available to help enforce those regulations?
- ✓ Does the parking code allow for a reduction in the number of required parking stalls with an employer CTR program?

Step 2. *Assess Existing and Planned Land Use and Transportation Conditions of the CTR Work Sites or CTR Work Site Cluster*

For each CTR-affected work site or work site cluster, the jurisdiction should assess the site for land use conditions that affect transit and ridesharing activities. Information on conditions that affect transit ridership can be provided by the transit agency. Issues that should be addressed by the jurisdiction include:

- ✓ Is the work site or work site cluster located in an area where there is the density (existing or planned) to support transit and/or ridesharing activities? (Note: it is recommended that an area be zoned to allow .50 Floor Area Ratio (FAR) minimum for urban centers and .35 FAR minimum for urban and suburban areas.)
- ✓ Is the work site or work site cluster designed to encourage transit and/or pedestrian activities?
- ✓ Are there sidewalks that link the work site or work site cluster to transit stops, commercial centers and/or residential neighborhoods?
- ✓ Are there bicycle lanes that connect the work site or work site cluster to other bicycle facilities?
- ✓ Are there transit stops within a quarter mile from the work site or work site cluster?

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

- ✓ Is there a transit center within a half mile from the work site or work site cluster?
- ✓ Is there frequent transit service near the work site or work site cluster? (Note: it is recommended that transit offers service every 30 minutes during the peak hour to be effective in attracting ridership.)
- ✓ What is the supply of parking near the work site or work site cluster and are there parking charges?

Step 3. *Identify Potential Actions for Jurisdictions to Eliminate Barriers at CTR Work Sites or CTR Work Site Cluster*

After assessing the land use and transportation conditions of the CTR work sites or work site cluster, the jurisdiction should identify potential actions it can take to improve the work sites or work site cluster conditions. Jurisdictions should refer to their comprehensive plans, sub area plans and local transit plans to identify projects that are planned that may bridge any gaps in the jurisdiction's infrastructure. Jurisdictions should also identify new steps that can help improve access to the work site. Specific strategies for helping the CTR work sites or work site cluster will be described in Section IV.

Land Use

Identify potential land use actions that a jurisdiction can take to increase more density near the work site, allow mixed-use development and require transit-oriented and pedestrian friendly development.

Transportation Facilities and Services

Jurisdictions can perform a number of actions with their transportation system that will help improve travel for transit, vanpool, carpool, bicycle and walking. Actions include building sidewalks and bicycle lanes, installing transit signal priority equipment and building high occupancy vehicle (HOV) lanes.

Jurisdictions can also implement a number of actions to help reduce the supply of parking at CTR work site or work site cluster. Actions include requiring a maximum number of parking spaces, allowing parking reduction incentives for CTR employers and managing the on-street parking supply.

Transit

The jurisdiction should work with its local transit provider to identify actions that can be taken to improve transit services for CTR work sites or work site cluster. If transit service is competitive with driving alone, it can help major employers achieve

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

progress toward meeting their goals. In order to be competitive, transit service needs to be frequent, reliable, and comfortable.

It is important to note that transit agencies have authority over decisions regarding transit services and facilities. There may be competing priorities that the transit agencies must balance and thus will not be able to serve all of the CTR work site, or work site cluster, needs.

The transit agency can assist with the transit service assessment. This assessment should include an analysis of existing service gaps and needs, and an identification of future service needs. The needs assessment should focus on:

- ✓ Transit service coverage (to major employment and activity centers)
- ✓ Transit service travel time
- ✓ Transit service frequency
- ✓ Span of service (days and hours)
- ✓ Provision of safe, accessible, high quality transit facilities
- ✓ Opportunities for multi-modal connections
- ✓ Transit stops
- ✓ Vanpool program needs



Step 4. Review Local Comprehensive Plan Policies

Jurisdictions are required to review their existing comprehensive plan to determine if their existing plan is consistent with the CTR law. Jurisdictions should review the most critical factors, i.e. land use and transportation policies, to ensure consistency. After reviewing the most critical factors, the jurisdiction may want to identify future amendments to their comprehensive plans and schedule those actions for their next comprehensive plan update.. Jurisdictions may want to add language to their comprehensive plans to discuss how their CTR plans are focused on a particular area of the jurisdiction.

Appendix G, contains a list of comprehensive planning policies that may be adopted by jurisdictions which will support the CTR law. The proposed policies may apply to your local jurisdiction or to your regional area as a whole. It is intended to provide an overall perspective on how the CTR law can be consistent with the local comprehensive plan.

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

The purpose of the list of comprehensive planning policies is to present a “menu approach” to implementing CTR policies into your local and regional comprehensive planning efforts and can be customized for small cities up to regional jurisdictions. While small cities may not want to adopt policies supporting high density urban centers, or GTEC’s, they can still implement many of the listed policies by harmoniously blending their CTR program with their community vision.

Jurisdictions are also encouraged to examine their concurrency policies to determine whether their existing policies encourage transit and ridesharing or promote increased road capacity. Many jurisdictions have strict level of service standards that result in building more road capacity versus multi-modal improvements.

Example:

Commute Trip Reduction & Growth Management Planning Policies	Regional	Large Cities	Medium Cities	Small Cities
Land Use Element				
Urban Growth Areas				
Enter into agreements and establish procedures for setting priorities, programming, maintaining and financing for countywide, regional and state transportation facilities and services consistent with the GMA current federal transportation legislation	✓	✓	✓	✓
Inter-Agency Coordination				
Work with transit providers to provide transit that is fast, frequent and reliable between urban centers, urban villages, GTEC’s and accessible to most of the city’s residences and businesses.	✓	✓	✓	✓

HINT:

For a list Comprehensive Plan Policies, please see Appendix G.

Step 5. Coordinate Planning with the RTPO and Neighboring Jurisdictions

Jurisdictions are required to coordinate planning with the regional planning transportation organization (RTPO) and neighboring jurisdictions to ensure that their CTR plans are consistent. If there are inconsistencies, the jurisdiction should

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

identify potential conflicts with their policies and plans. In addition, cross boundary issues such as pass through commute patterns and other larger regional issues should be identified, and how these issues affect the local CTR plan. When coordinating planning, these questions should be considered:

- ✓ Who are your adjacent jurisdictions?
- ✓ Do adjacent jurisdictions have a CTR program?
- ✓ Are your goals and policies consistent with neighboring jurisdictions and the local RTPO?
- ✓ What potential conflicts exist that may affect your jurisdiction's ability to have a successful CTR program?

OPTIONAL STEP

Step 6. *Prepare a Broad Assessment of the Jurisdiction's Existing and Planned Land Use, Transportation and Transit Conditions*

Although jurisdictions are required only to assess the conditions for their CTR work sites, or work site cluster, they may want to take a broader look at their existing and planned land uses and transportation system so that they can evaluate more broadly how well their jurisdiction can attain an efficient transportation system and transportation-efficient land uses.

Land Use

- ✓ Does the jurisdiction have targeted growth areas for population and employment?
- ✓ Does the jurisdiction have areas where there is sufficient density to support transit and ridesharing activities?
- ✓ Does the jurisdiction have urban design guidelines that support transit, bicycle and pedestrian uses?
- ✓ Does the jurisdiction allow for mixed-use development?

Transportation

- ✓ Does the transportation system support all modes of travel?
- ✓ Does the jurisdiction have a network of non-motorized facilities to support bicycling and walking?
- ✓ Does the jurisdiction make sufficient infrastructure investments to help facilitate the movement of transit and high-occupancy vehicles?



HOV lanes are planned for SR 167.

SECTION I: ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

Transit

Jurisdictions are encouraged to work with their transit agencies to collaboratively review their transit needs. Transit agencies may be able to assist jurisdictions by providing information from their long range plans and capital investment programs.

- ✓ What areas of your jurisdiction are served by transit and what areas are not served?
- ✓ What are the transit agency's plans to improve transit?
- ✓ What types of services and facilities would help increase transit ridership?

Parking

- ✓ What are the current parking requirements for requiring parking for new development?
- ✓ Does the jurisdiction require a maximum number of parking spaces for new development?
- ✓ Does the jurisdiction manage their on-street parking supply?
- ✓ Does the jurisdiction charge for on-street parking?
- ✓ Does the jurisdiction have information about its available parking supply and utilization rates (if so, please provide)?



The City of Seattle manages its on-street parking supply by using pay stations.

SECTION II: SETTING THE BASELINE AND WAYS TO MEASURE PROGRESS

The purpose of this section is to provide guidance for setting the baseline and measuring progress toward meeting goals and targets of the CTR program. Base year values are critical because they set the benchmark for determining whether the jurisdiction and employer have made progress toward their goals.

WSDOT will provide the baseline for the jurisdiction from the CTR survey data, as well as baselines for employers that have been surveyed in 2005. The baselines are for drive alone rates and VMT.

To understand how WSDOT sets the baseline for the jurisdiction, the following section describes the methodology for setting the baseline which relies primarily on information provided from the CTR employer surveys.

METHODOLOGY FOR SETTING THE BASELINE

Step 1. Set Baseline for Drive Alone Trips

As shown in **Table 1**, the CTR survey data provides a summary of the commute travel behavior of affected CTR worksite employees in the City of Kirkland:

Table 1 – Example CTR Survey Commute Trip Data (City of Kirkland 2005)

Percentage of Drive Alone Commute Trips	77%
Percentage of Carpool Commute Trips	11%
Percentage of Vanpool Commute Trips	1%
Percentage of Bus Commute Trips	4%
Percentage of Train Commute Trips	1%
Percentage of Bicycle Commute Trips	1%
Percentage of Walk Commute Trips	1%
Percentage of Commute Trips Saved due to Telecommuting	0%
Percentage of Commute Trips Saved due to Schedule	6%

Based on the 2005 CTR survey data, the baseline rate for drive alone trips for the City of Kirkland is 77%.

Step 2. Set Baseline for Vehicle Miles Traveled (VMT)

To set the baseline for the VMT rate per commuter, the most recent CTR survey data is used to calculate of the VMT of affected CTR worksite employees within the jurisdiction. To calculate the VMT Rate:

VMT rate = Total Vehicles Miles Traveled / Number of Affected Commuters

City of Kirkland daily VMT rate = (48,473 / 4305) = 11 miles per commuter per day

SECTION II: SETTING THE BASELINE AND WAYS TO MEASURE PROGRESS

Table 2 – VMT Estimates from City of Kirkland CTR Survey Data

Actual CTR Commuter VMT per day	48,473
VMT rate per commuter per day at CTR work sites	11 miles/commuter

ALTERNATIVE METHOD FOR SETTING THE BASELINE USING US CENSUS DATA

Although the CTR Office is open to allowing alternative methods for setting the baseline and measuring projects, at present it has not approved any alternatives. In principle, the 2000 US Census CTPP Journey-to-Work data could be used for setting the baseline, but comparable data will not be available from the Census for subsequent years, including the 2011 measurement of jurisdiction progress. In addition, data for subsequent years will be collected through the Census Bureau's American Community Survey (ACS) and will be reported as a rolling average of several years' worth of data. This means that changes that occur in, say, 2010, will be masked by being combined with data collected in earlier years, making it difficult to discern small changes. The CTR Office will revisit the use of ACS data once more experience has been gained with using it.

Data from the 2000 Census can be useful for including a broader perspective on commuting in the jurisdiction, however, and on the benefits that might be realized by working with more than just CTR employers to reduce commute vehicle trips (see Section X for an example).

Step 3: *Identify How Jurisdiction Will Plan to Measure Progress*

The jurisdiction is required to describe how it plans to measure progress. WSDOT will provide measurement guidelines which include the requirement that jurisdictions must measure progress every two years using a measurement instrument consistent with the guidelines.

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Local jurisdictions are required to set goals and targets for their entire jurisdiction and for their CTR work sites, or work site cluster. The minimum target that each jurisdiction is required to establish for its urban growth area is a 10 percent reduction in drive alone commute trips by CTR commuters and a 13 percent reduction in vehicle miles traveled (VMT) per CTR commuter. To meet the jurisdiction goal and target, the jurisdiction will work with their respective employers to set targets for their work sites. The CTR rules allow a jurisdiction to set the same goal for each employer or allow variable goals. Each employer will need to work with the jurisdiction to reach the target set for its work site and identify strategies to meet the goal.

STEP 1: SET GOALS AND TARGETS FOR THE JURISDICTION

Option A: Set the Same Target Across the Urban Growth Area

Using the latest available CTR survey data (2005, unless 2007 data is available), WSDOT will provide the baseline for the jurisdictions. The baseline is the benchmark for determining whether the jurisdiction has made progress towards its goal. Based on the baseline set by WSDOT, the jurisdiction should set its goal and establish their 2011 target. The following example illustrates how the jurisdiction will set its goal and target:

Example of Setting the Jurisdiction Goal and Target:

Jurisdiction X currently has the following overall drive alone rate for its CTR work sites or work site cluster:

Drive alone rate: 80%
Non-Drive Alone rate: 20%

Jurisdiction X establishes the minimum goal of reducing drive alone trips by 10%. Based on this goal, the jurisdiction's target for 2011 is:

(Baseline rate – 10% of baseline rate = new target)

(80% - 8% = 72%)

Drive alone rate: 72%
Non-Drive alone rate: 28%

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Option B: Set Variable Targets in Sub Areas Across the Urban Growth Area

Jurisdictions have the option of setting variable targets in sub areas across the urban growth area. For example, a jurisdiction could set a higher goal for its Downtown and a lower goal for an area that has less density and transit services. The variable sub area targets must add up to at least the minimum target established by the state.

Example:

Area	2005 Drive Alone Rate	2011 Drive Alone Goal	2005 VMT Rate	2011 VMT Goal
Downtown	70	60	5	4
Rest of Jurisdiction	80	74	7	6
Entire Jurisdiction	75	67	6 mi/commuter/day	5 mi/commuter/day

In the above example, jurisdiction X sets a goal for its Downtown sub area and a goal for the rest of the jurisdiction. The combination of goals meets the state minimum requirement of reducing drive alone trips by 10% and VMT by 13%.

To set variable targets for different sub areas, the jurisdiction should review their comprehensive plan for guidance, consider planned transportation improvements and consider the potential markets. Below is a description of these factors that a jurisdiction should consider when setting variable targets.

Review Comprehensive Plan for Guidance

To determine its CTR goals for the entire jurisdiction or sub-areas of the jurisdiction, the jurisdiction should review its comprehensive plan for guidance. When reviewing the comprehensive plan, the following issues should be considered:

- ✓ Does the comprehensive plan encourage high densities in certain areas?
- ✓ Does the comprehensive plan encourage any particular areas to have a high concentration of employment and/or residents?

Review Planned Transportation Facility Improvements

Using the Jurisdiction's Comprehensive Plan Transportation Element, the jurisdiction should identify the types of transportation improvements that are planned and how they can help increase the different mode shares. Jurisdictions with well connected transportation networks including streets, sidewalks or bicycle

SECTION III: SETTING GOALS AND TARGETS FOR 2011

facilities, and have a well integrated transit system can expect higher mode splits, particularly if the transportation network serves dense, mixed-use development.

Questions that should be asked include:

- ✓ Does the jurisdiction plan to make significant investments in transit services and facilities?
- ✓ Does the jurisdiction plan to build bicycle lanes and sidewalks that will encourage commuting by non-motorized forms of transportation? Are there projects in line to fill the gaps?
- ✓ Does the transit agency plan to provide services and facilities that will help achieve higher goals and targets?
- ✓ Does the jurisdiction plan to restrict or manage parking in the area through on-street parking management or zoning code requirements?

Consider the Potential Markets

The jurisdiction should analyze the potential markets for reducing drive alone trips and VMT. Some markets are more successful than others for using transportation demand management (TDM) strategies to reduce drive alone trips and VMT.

For example, some strategies like telecommuting, flex-time and compressed work weeks are applicable in numerous markets, from dense central cities to suburban areas. Transit pass subsidies are less successful the further away from the central jurisdiction an area is. Vanpools are conducive if riders live along a similar axis to the work site, where out-of-direction travel is not an issue.

If a jurisdiction has a market that responds well to TDM strategies, it may want to set more aggressive goals and targets. For areas of the jurisdiction that don't respond well to TDM strategies, the jurisdiction may opt for using the minimum goal.

If the jurisdiction finds that it has the right mix of land use, transportation facilities and services and markets that respond well to TDM, it may opt to set variable targets in sub areas. By establishing higher goals and targets, the jurisdiction will see greater benefits to its transportation system.

Note: Under both options, jurisdictions have the option of setting higher goals and targets than the minimum goals established by the CTR Efficiency Act. By setting a more aggressive target, the jurisdiction could result in more benefits to its transportation system.

Case Example: City of Bellevue

A recent study shows a big drop in the number of Bellevue residents and workers who are commuting alone.

Estimates on commuting modes and average travel time to work were released last month from the Census Bureau's 2005 American Community Survey. In 2000, an estimated 74 percent of working Bellevue residents drove alone on their commutes. By 2005, that number dropped to 68 percent.



Bellevue Transit Center

City of Bellevue transportation planners credit several factors, including increased use of public transit – almost a three percent increase in five years – and more people who actually are able to walk to work from residential areas in and near Downtown Bellevue and other employment centers.

King County Metro Transit has several programs underway, such as “In Motion,” that enhance travel options for Bellevue residents and workers. The goal is to make it easier than ever to leave your car at home, even when you live in the suburbs.

“Convenience is the key,” says Metro General Manager Kevin Desmond. “The bus works best for many Bellevue employees. For others, Metro goes the extra mile to make it easy to access a vanpool, VanShare or carpool.”

SECTION III: SETTING GOALS AND TARGETS FOR 2011

STEP 2: SET GOALS AND TARGETS FOR EMPLOYERS

Option A: Set Same Target for Each CTR Work Site

To achieve the goal and target for the jurisdiction, the jurisdiction must set goals and targets for the individual CTR work sites. Under option A, the jurisdiction can set the same target for each CTR work site as long as the accumulation of employer goals meets the state minimum requirement for the jurisdiction goal.

For example, a jurisdiction may opt to set a goal of reducing drive alone trips by 10% for each CTR work site. The accumulation of these work site goals will meet the state minimum required goal of reducing drive alone trips by 10% for the jurisdiction.

Option B. Set Variable Targets for CTR Work Sites

Under option B, the jurisdictions can set targets that vary from major employer work site to major employer work site based on the goals and measurement system implemented by the jurisdiction. The accumulation of the jurisdiction's work site goals must meet the minimum goal of 10% for reducing drive alone trips and 13% for reducing VMT for the jurisdiction.

To set variable targets, the jurisdiction should consider the following factors that will influence an employer's ability to reduce drive alone trips and VMT:

- ✓ Previous engagement in trip reduction programs by the employer;
- ✓ Current conditions, policies and services designed to reduce drive-alone travel in the vicinity of the major employer worksite;
- ✓ Planned investments, services and policy changes and other strategies designed to reduce drive-alone travel in the vicinity of the major employer worksite;
- ✓ Transit access to the employer worksite and frequency of transit service during peak periods in the vicinity of the major employer worksite;
- ✓ Potential for ridematching internally and with other employers in the area;
- ✓ Bicycle and pedestrian access to the major employer worksite; and
- ✓ Ability to implement compressed work week schedules and/or teleworking



Microsoft offers a comprehensive transportation program to its employees.

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Review Work Site History and Existing Conditions

Jurisdictions may opt to set variable targets for work sites because previous engagement with trip reduction activities varies from work site to work site. Some work sites have a successful history in participating in trip reduction activities which resulted in reducing drive alone trips and/or VMT. Other work sites may have little or no previous experience with trip reduction activities and may have a higher potential for reducing drive alone trips or VMT.

To set goals for the CTR work sites, the jurisdiction and employer should work together to identify the existing conditions at the work site and the available tools that can help the employer achieve their goals. The employer should select tools that are successful for the type situation that the work site is located in and the available services and facilities at the employer's work site. The jurisdiction should work with their employers to inform them on what services and facilities are currently available and planned for the area.

Commute Trip Reduction Tools

The following table describes the tools that employers can use to help reduce drive alone trips and VMT and the type of environment in which the tool is effective. On the right of each tool, a checkmark indicates the type of environment that the element would work well under. The types of environments are:

High Density – This type of environment frequently has a high concentration of population and employment. High density areas typically have good levels of transit service, supporting transit facilities and a network of bicycle and sidewalk facilities. Parking supply in high density areas is limited and frequently have parking charges.

Suburban – This type of environment is less dense than high density urban environments. Suburban areas have medium population and employment densities. These areas may have some transit service that operates well for peak hours but not for non-peak hours. Parking is usually available at no cost. Suburban areas typically lack adequate bicycle and sidewalk facilities.

Manufacturing Center – Manufacturing centers are typically areas with low concentrations of population and employment. Transit services in these areas are usually limited along with transit supporting facilities. There is typically a large supply of parking available at no cost. Although this type of environment typically does not have well developed transportation infrastructure, there are strategies that can work successfully in this environment such as compressed work weeks, telecommuting and ridesharing.

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
Telecommuting	<p>Telecommuting is allowing an employee to work from a remote location other than the office. This location can be at home or at a site that is not the primary office. Telecommuting has the potential of eliminating drive alone trips and lowering VMT by completely removing trips from the system if the employee is able to and allowed to work from their residence. Full-time telecommuting has the highest “potential” trip reduction of all trip reducing tools – up to 91%. Telecommuting is most applicable in work environments that do not require face-to-face contact. Many office environments fit this requirement.</p>	✓	✓	✓
Compressed Work Week	<p>This tool allows employees to work their regularly scheduled number of hours in fewer days per week or over a number of weeks. There are three common schedules:</p> <ul style="list-style-type: none"> • 9/80 Schedule: Eighty hours are worked over nine days in two weeks. One day off every two weeks. • 4/40 Schedule: Four ten-hour days worked per week. One day off each week. • 3/36 Schedule: Three twelve-hour days worked per week. Two days off each week. 	✓	✓	✓

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
On-Site Ride Matching	<p>Employees who are interested in carpooling or vanpooling provide information to the Employee Transportation Coordinator (ETC) regarding their work hours, availability of a vehicle, and place of residence. The ETC then matches employees who can reasonably rideshare together, works with neighboring employers to find matches or submits the information to a regional database for matching. Most often, the regional transit agency builds and maintains the database and is able to run a rideshare matching program.</p> <p>Successfully creating and sustaining employee carpools or vanpools requires that employees live close enough to each other (or along the route taken to the work site) and far enough away from work so that the time required for pick up and drop off does not significantly add to the total commute time. In addition, employees who rideshare would need to have similar start and end times at work, with a relatively high level of certainty that their start and end times will be consistent on a day-to-day basis. The variation found among employees for each of these factors will influence whether the lower or higher end of the range should be selected.</p>	✓	✓	✓

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
Vanpool Program	<p>Employees that live near each other are organized into a vanpool for their trip to work. A central meeting location is designated where the employees are picked up and dropped off. The employer may subsidize the cost of operating and maintaining the van.</p> <p>Similar to on-site rideshare matching, the formation of vanpools requires that employees live close enough to each other (or along the route taken to the work site) and far enough away from work so that the time required to meet at a common pick-up point does not significantly add to the total commute time. In addition, employees who vanpool would need to have similar start and end times at work, with a relatively high level of certainty that their start and end times will be consistent on a day-to-day basis.</p>	✓	✓	✓
Company Cars for Business Travel	<p>Employees are allowed to use company cars for business-related travel during the day. This tool helps to remove the disincentive for using an alternate mode for those people who feel they need their cars for business purposes during the workday.</p>	✓	✓	✓

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
Guaranteed Ride Home Program	<p>A guaranteed ride home program provides a company-owned or leased vehicle or taxi fare in the case of an emergency for employees that carpool, vanpool, use transit, walk, or bicycle, so that they can get home quickly.</p> <p>A guaranteed ride home program has the potential to increase the effectiveness of other CTR tools that encourage the use of transit or ridesharing. The additional effectiveness from this tool is relatively small compared to the other tools implemented, therefore, the value selected from the range listed would in part be based upon the percent of trip reduction estimated from transit and ridesharing. This tool also has a greater impact in situations in which employees have expressed a concern about the need for a ride home in the case of an emergency or if the employee is required to work late.</p>	✓	✓	✓
Transit Pass Subsidy	<p>Employers that pay for all or part of the cost of a monthly transit pass have found that it increases the number of employees who utilize mass transit opportunities. The effectiveness of transit pass subsidies is based on the availability and frequency of transit. Transit usage generally increases, for work trip purposes, either the closer to the center of transit service the work site is or the availability of transit from the originating (home) site. Two key factors on the availability side of the equation are frequency of service and the number of transfers necessary for the trip. Many employees who live in the suburbs do not benefit from transit usage either because there is no convenient transit service near their homes, or they must transfer transit lines more than once during their trip.</p>	✓	✓	

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
On Site Services	<p>Provide services at the work site that are frequently used by the employees of that work site. Examples include cafes/restaurants, dry cleaners, day care centers, and bank machines.</p> <p>The variation and number of on-site services that are provided for employees will influence the amount of trip reduction that can be achieved. If a variety of on-site services are provided a greater trip reduction can be expected. It is also important to provide services that are of interest to the employees located at a particular site.</p> <p>The provision of on-site services allows employees to run errands before, during and after work without having to travel away from the work site. Because services are adjacent to or on-site, employees do not need to drive to work. Of course it is impossible to provide every service that could be needed by every employee, but basic services located on-site have the potential to reduce drive alone trips and VMT.</p> <p>When planning new employment centers, local jurisdictions and developers should work together to create a plan that will provide a mix of uses that are ancillary to the primary employment use.</p>	✓	✓	
Parking Cash Out	<p>This program is offered when an employer that has been subsidizing parking discontinues the subsidy and charges all employees for parking. An amount equivalent to the previous subsidy is then provided to each employee, who can then decide whether to continue driving (at no net change in travel cost to them) or use an alternate mode (which would presumably cost less). Thus, those who use an alternate mode would realize a monetary gain.</p>	✓		

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
Eliminate Parking Subsidies	The portion of the cost of parking that is paid for by the employer is eliminated, and the employee pays an increased cost for parking. The existing subsidy may be in the form of payments for the parking places to a third party (such as the operator of a parking garage) or may be included in the building/office lease.	✓		
Reduced Cost Parking for HOVs	Parking costs charged to employees are reduced for carpools and vanpools. As an additional incentive, the employer can offer reserved car/vanpool parking spaces close to the building entrances.	✓		
Bicycling Program	Provide support services to employees that bicycle to work. At a minimum, this would include safe and secure bicycle storage. An employer can expect higher bicycle ridership if changing facilities that include showers are provided. A direct subsidy towards the purchase of a bicycle can also increase ridership.	✓	✓	
Walking Program	<p>The employer provides support services for those who walk to work. This could include buying walking shoes or providing shower facilities.</p> <p>The successfulness of a walking program will depend upon the number of employees that live within a reasonable walking distance from work. The greater majority of those who would walk to work live within one mile of the work site. Pedestrian accessibility to the work site is also an important factor. Employees will be more willing to walk to work if there are sidewalks that provide a safe and direct route from their home to the door of their work site.</p> <p>Deterrents to walking include the need to cross streets with a great deal of traffic, lack of direct access (i.e., a fence that has been erected between a residential area and an office complex), and the presence of safety concerns (i.e., high crime in the neighborhood).</p>	✓	✓	

SECTION III: SETTING GOALS AND TARGETS FOR 2011

Tool	Description	High Density	Suburban	Manufacturing Center
Alternative Travel Mode Subsidy	For those employees that commute to work by a mode other than driving alone, the employer provides a monetary bonus to the employee. Most often, the bonus is provided monthly in the employee's paycheck.		✓	✓
Rewards for Alternative Mode Use	With this tool, employees are offered the opportunity to receive a gift or an award for using modes other than driving alone. This strategy could be designed so that employees receive points every time they use an alternate mode, and then accumulated points can be used to "purchase" an award. Another approach is to raffle prizes as part of a marketing campaign (i.e., an annual rideshare fair) where the raffle tickets are distributed in proportion to the amount of alternate mode use by each employee.		✓	✓
Time Off with Pay for Alternative Mode use	Rather than a monetary incentive, a gift, or an award, employees are offered time off with pay as an incentive to using alternate modes. An example may be to offer an extra day off with pay to employees who use a mode other than driving alone over a three-month period.		✓	✓

Eco Checklist prepared by JHK & Associates in their final report titled "Alternatives to Single Occupant Vehicle Trips" prepared for the Oregon Department of Environmental Quality, June 1995.

To help calculate the goal for a work site, the following worksheet has been provided. The worksheet includes all of the tools described in the previous section; the range of potential trips reduced and a simple formula for determining what the overall potential trip reduction possibility is for your particular work site or work site cluster. There is also a column for estimated cost of implementation. The cost column will help the jurisdiction identify what various combinations might cost to implement.

SECTION III: SETTING GOALS AND TARGETS FOR 2011

CTR Strategy Tools	Potential Trip Reduction ²	Percentage of Employees Who will be offered This Strategy	Overall Potential Trip Reduction	Estimated Cost**	Employer's Trip Reduction Target for Strategy
Telecommuting		See End note 1			
Full Time	82 - 91%	_____	_____		
1-2 Days/Week	14 - 36%	_____	_____		
Compressed Work Week		See End note 1			
9/80 Schedule	7 - 9%	_____	_____		
4/40 Schedule	16 - 18%	_____	_____		
3/36 Schedule	32 - 35%	_____	_____		
Transit Pass Subsidy					
Full Subsidy					
-High Transit Service	19 - 32%	_____	_____		
-Medium Transit Service	4 - 6%	_____	_____		
-Low Transit Service	.5 - 1%	_____	_____		
1/2 Subsidy					
-High Transit Service	10 - 16%	_____	_____		
-Medium Transit Service	2 - 3%	_____	_____		
-Low Transit Service	0 - .5%	_____	_____		
Cash out Employee Parking					
-High Transit Service	8 - 20%	_____	_____		
-Medium Transit Service	5 - 9%	_____	_____		
-Low Transit Service	2 - 4%	_____	_____		
Eliminate Parking Subsidies					
-High Transit Service	8 - 20%	_____	_____		
-Medium Transit Service	5 - 9%	_____	_____		
-Low Transit Service	2 - 4%	_____	_____		
Reduced Cost Parking for HOVs	1 - 3%	_____	1 - 3%		_____
Alternate Mode Subsidy					
Full Subsidy					
-High Transit Service, PEF	21 - 34%	_____	_____		
-Medium Transit Service, PEF	5 - 7%	_____	_____		
-Low Transit Service, PEF	1 - 2%	_____	_____		
1/2 Subsidy					
-High Transit Service, PEF	10 - 17%	_____	_____		
-Medium Transit Service, PEF	2 - 4%	_____	_____		
-Low Transit Service, PEF	.5 - 1%	_____	_____		
On-Site Services	1 - 2%	_____	1 - 2%		_____
Bicycling Program		See End Note 2			
	0 - 10%	_____	_____		_____

² Source of potential trip reduction figures comes from Eco Checklist prepared by JHK & Associates in their final report titled "Alternatives to Single Occupant Vehicle Trips" prepared for the Oregon Department of Environmental Quality, June 1995. WSDOT will evaluate these potential reduction rates over time to refine them using the experience of Washington State CTR employers.

SECTION III: SETTING GOALS AND TARGETS FOR 2011

On-Site Rideshare matching for Carpools and Vanpools							
CTR Strategy Tools	Potential Trip Reduction	X	Percentage of Employees Who will be offered This Strategy	=	Overall Potential Trip Reduction	Estimated Cost**	Employer's Trip Reduction Target for Strategy
Without Support Strategies	1 – 2%				1 - 2%		
With Support Strategies	6 – 8%				6 - 8%		
Provide Vanpools	See End note 3						
Company - Provided Vans With a Fee	15 - 25%						
Company - Subsidized Vans	30 - 40%						
Gifts/Awards for Alternative Mode Use	0 – 3%				0 - 3%		
Flex Car Available for Use	1 – 3%				1 - 3%		
Walking Program	0 – 3%				0 - 3%		
Time Off With Pay for Alternative Mode Use	1 – 2%						
Company Car for Business Travel	0 – 1%				0 - 1%		
Guaranteed Ride Home Program*	1 – 3%				1 - 3%		
			TOTAL ESTIMATED COST**			\$	0.00%
						-	
			TOTAL ESTIMATED EFFECTIVENESS				

*Can only be selected in combination with more effective transit, ridesharing, or parking measures.

**For estimating only. Costs can vary widely depending on service, location , number of employees, etc.

SUPPORT STRATEGIES

In addition to the CTR strategy tools in the checklist, at least two (2) support strategies must be selected. Please circle those support strategies from the list below that will be implemented.

Employee Transportation Coordinator
Marketing/Educational Campaign
Preferential Parking for HOVs
On-Site Transit Pass Sales

Employee Recognition Program (for exemplary CTR participants)
Shuttles

- to High Capacity Transit Stations
- within a multi-use development
- between developments

Other (please specify) _____

- 1 Percentage of employees actually expected to participate
- 2 Percentage of employees who live within 6 miles of the work site.
- 3 Percentage of employees who live more than 20 miles away from the work site.

SECTION IV: DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

After establishing the goals for the CTR program, the jurisdiction must prepare a plan for local services and strategies for achieving the goals. The purpose of this section is to identify specific local services and strategies that are tailored to the existing conditions of the jurisdiction. If the jurisdiction does not identify adequate services or strategies that will help the jurisdiction achieve its goals and targets, the plan may not be deemed acceptable.

This section should be given the most time and effort and should be done by consulting other parties for input. Recognizing that the involvement of other agencies will be needed to help achieve the CTR program goals, the jurisdiction should identify other partner agencies and list strategies that they will help implement. For example, if the jurisdiction identifies a strategy to provide additional transit services, the transit agency will be required to confirm that they will attempt to provide the service. In Section VIII, the jurisdiction will identify the partners in the proposed organization structure.

Step 1. *Identify Improvements for Policies and Regulations*

Based on the review of the existing policies and regulations, the jurisdiction should identify what policy and regulation changes could be made that will help the jurisdiction make progress toward meeting its CTR goals.

Comprehensive Plan Policies

Based on the review of the jurisdiction's existing comprehensive plan policies, the jurisdiction will identify any missing policies that may be important for integrating CTR with its comprehensive planning goals.

Land Use and Zoning Code Regulations

Land use changes may include changing the zoning in some areas to allow more density. Changes may also include reducing the amount of parking required for new development. Jurisdictions should incorporate mixed use development where possible.

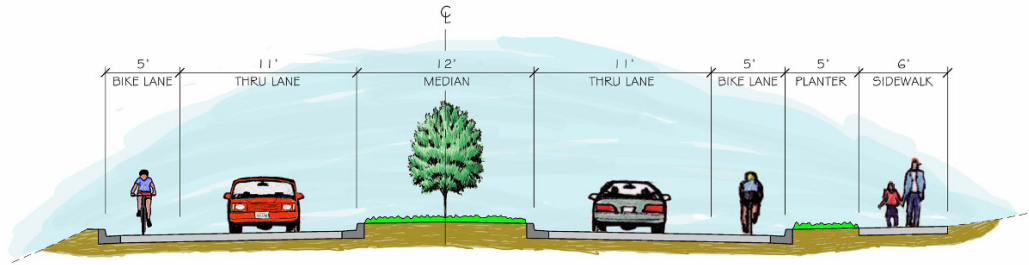


Increased density supports CTR.

SECTION IV: DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

Street Design Standards

Changes to the street design standards may include changes to improve the bicycle and pedestrian environment. It may also include changes to make the streetscape more transit-oriented.



Concurrency Regulations

Changes to the Jurisdiction's concurrency regulations may include giving developers credit for implementing trip reduction measures.

Step 2. *Identify Services and Facilities*

The jurisdiction will identify planned improvements to its services and facilities that will help the jurisdiction make progress toward its goals. Services and facility improvements may include items that are part of the jurisdiction's capital investment plan and the transit agency's capital improvement plan. Items that the jurisdiction may consider include:

- ✓ High occupancy vehicle lanes
- ✓ Transit services
- ✓ Vanpool services and vehicles
- ✓ Ride matching services
- ✓ Car sharing services
- ✓ Transit facilities
- ✓ Bicycle and sidewalk facilities

SECTION IV: DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

Step 3. *Identify Marketing and Incentive Programs*

The jurisdiction will describe various plans and efforts to implement the marketing and incentive programs that will help reduce drive alone trips and vehicle miles traveled. These elements may include:

- ✓ Employer outreach
- ✓ Area wide promotions
- ✓ Transit pass discounts
- ✓ Parking cash-out programs
- ✓ Carpool subsidies
- ✓ Parking charges and discounts
- ✓ Preferential parking
- ✓ Flexible work schedules
- ✓ Program to allow employees to work at home or a closer worksite
- ✓ Individualized marketing programs
- ✓ Neighborhood social marketing programs



The Duwamish TMA sponsored the Easy Rewards program.

Step 4. *Identify Special Programs for Mitigation of Construction Activities*

If the jurisdiction is planning on any major construction activities, it may consider implementing programs that will help reduce drive alone trips and vehicle miles traveled. Opportunities for using trip reduction programs during construction activities may be successful in the short term and can help lead to long term benefits.

Under this section, the jurisdiction is encouraged to identify construction projects that are expected to impact the transportation system and identify potential trip reduction programs to help mitigate the impacts of construction activities.

Step 5. *Prepare a Schedule for Implementation*

After identifying the strategies and services that the jurisdiction and its partners will implement, the jurisdiction should prepare a schedule for when the strategies and services will be implemented. The jurisdiction should also identify what the constraints and/or risks are that could hinder the implementation of a particular service or strategy and what the jurisdiction hopes to accomplish with each proposal.

SECTION V: CONTRIBUTIONS FROM MAJOR EMPLOYERS

The purpose of this section is to describe the required contributions from major employers. Local jurisdictions should identify what expectations that they have of major employers. The CTR law specifies that major employers are required to provide four elements as part of their CTR programs. However, the local jurisdiction can opt to require additional elements in their CTR ordinances.

Step 1. Review Requirements for Major Employers and Incorporate Into CTR Plan

A. Designate Employee Transportation Coordinator

The Employee Transportation Coordinator (ETC) is the liaison between the employer and its workforce to implement, promote and administer the organization's CTR program. The ETC is also the point of contact between the employer and the local jurisdiction to track the employer's progress in meeting CTR requirements.

B. Regular Distribution of Information to Employees

Information about commute alternatives will be distributed regularly to employees. Examples of information that will be distributed include:

- ✓ Description of the employer's commute options program
- ✓ Transit system maps and schedules
- ✓ Vanpool rider alerts
- ✓ Weekly traffic alerts
- ✓ Washington State CTR Promotions (Wheel Options) campaign promotional materials

C. Regular Review of Employee of Commuting and Reporting of Progress

The employer is required to complete the employer annual report and program description form and submit it to the local jurisdiction. Every two years, the employer shall conduct a program evaluation to determine worksite progress toward meeting the CTR goals. As part of the program evaluation, the employer shall distribute and collect Commute Trip Reduction Program Employee Questionnaires (surveys) to achieve at least a 70 percent response rate.

D. Implementation of a Set of Measures

The employer is required to implement a set of measures that are designed to reduce the percentage of employees making drive alone trips and VMT. Measures to reduce drive alone trips and vehicle miles traveled include, but are not limited to:

SECTION V: CONTRIBUTIONS FROM MAJOR EMPLOYERS

- ✓ Provision of preferential parking or reduced parking charges for high occupancy vehicles
- ✓ Instituting or increasing parking charges for drive alone vehicles
- ✓ Provision of commuter ride matching services
- ✓ Provision of subsidies for transit fares
- ✓ Provisions of vans for vanpools
- ✓ Provisions of subsidies for carpooling or vanpooling
- ✓ Permitting the use of the employer's vehicles for carpooling or vanpooling
- ✓ Permitting flexible work schedules
- ✓ Cooperation with transportation providers to provide additional regular or express service to the worksite
- ✓ Construction of special loading and unloading facilities for transit, carpool, and vanpool users
- ✓ Provision of bicycle parking facilities, lockers, changing areas, and showers
- ✓ Provision of a program for parking incentives such as a rebate for employees who do not use the parking facility
- ✓ Establishment of a program to permit employees to work part or full time at home or at an alternate work site closer to their homes
- ✓ Establishment of a program of alternative work schedules such as compressed work week schedules
- ✓ Implementation of other measures designed to facilitate the use of high-occupancy vehicles such as on-site day care facilities and emergency taxi services
- ✓ Employers or owners of work sites may form or utilize existing transportation management associations or other transportation-related associations by RCW 35.87A.010 to assist members in developing and implementing commute trip reduction programs.



Vanpool provided by King County Metro

Step 2. Identify Additional Requirements

The jurisdiction has the option to require additional elements from the major employers. If it opts to require additional elements, it should consult with WSDOT staff.

SECTION VI: DOCUMENTATION OF CONSULTATION

The jurisdiction is required to document the process it used to develop its CTR plan. To develop its CTR plan, jurisdictions are encouraged to collaborate with various groups and individuals. The jurisdiction should identify the party that was involved and the opportunity that was given to them for providing input on the CTR plan as part of its documentation. A table has been provided in the model CTR plan (see Appendix E) to help the jurisdiction document their process. Groups and individuals that should be consulted include, but are not limited to:

1. City or County

- ✓ Department of Planning and Community Development
- ✓ Department of Public Works
- ✓ Department of Finance
- ✓ Planning Commission
- ✓ City or County Council

2. WSDOT – Public Transportation and Rail Division

3. Regional Transportation Planning Organization

4. Neighboring Cities, Surrounding County, and/or Neighboring Counties

5. Major Employers

6. Business Groups

7. Transit Agencies

8. Transportation Management Associations

9. Community Groups

10. Special Interest Groups

- ✓ Transportation Choices Coalition
- ✓ Futurewise
- ✓ Cascade Bicycle Club

11. Individuals



The Cascade Bicycle Club advocates for improved bicycle facilities.

SECTION VII: A SUSTAINABLE FINANCIAL PLAN

The jurisdiction is required to prepare a sustainable financial plan for implementing their local CTR plan. The financial plan includes revenues and expenses that are associated with the jurisdiction's CTR plan. The plan is for the years 2007 - 2011 and should include revenues that are expected to be available during this period, recognizing that future funding is never guaranteed. The purpose of preparing a financial plan is for the jurisdiction to show how they will anticipate funding their services and strategies to support their CTR plan while identifying funding gaps.

There are a variety of revenue sources that the jurisdiction may want to include. Revenue sources may include the jurisdiction's CTR grant allocation, capital improvement program funds, general operating budget funds and grants that have been awarded to the jurisdiction. Only funds that directly benefit the jurisdiction's CTR program should be included.

After identifying the available funding sources, the jurisdiction should identify the CTR program expenses which include program administration, training, employer assistance, policy and regulation development, promotional activities, transit and ridesharing services, and implementation of supporting facilities. Tables in the model CTR plan have been provided to help jurisdictions prepare its financial plan.



The Washington Pedestrian and Bicycle Safety Program is a funding source that jurisdictions could use to help implement their CTR plans.

As part of preparing a sustainable financial plan, the jurisdiction should identify financial gaps in funding their CTR program. This information will be useful for identifying future funding needs.

A. Funding Sources

1. *WSDOT CTR Grant*

The WSDOT CTR Grant is the annual allocation that is given to jurisdictions to help them administer their CTR programs. For information, contact the WSDOT Public Transportation and Rail Division CTR section.

2. *Local jurisdiction operating funds and capital investment program funds*

Local jurisdiction resources include funds from their operating budgets and capital investment programs. Capital investment programs funds are usually earmarked for certain projects such as bicycle and sidewalk facilities, intelligent transportation system equipment, and road improvements. Only local funds that directly benefit CTR work sites, or work site cluster, should be included in the revenues.

3. *Federal funds*

Federal funds include the grants from the Congestion Mitigation and Air Quality Improvement program, Surface Transportation Program, and the Federal Transit Administration. Jurisdictions should consider opportunities for obtaining funds from the next cycle of the Surface Transportation Program which will begin in fall 2008. For more information about federal funds, contact your local RTPO.

4. *Employer contributions*

These funding sources include contributions (both financial and in-kind) from employers that benefit the jurisdiction's CTR program. Employer contributions, for the purposes of the financial plan, should not include expenses for employee transportation benefits, i.e., transit pass subsidies, transportation subsidies, etc.

5. *Other State funding sources*

Funding sources include other state programs that provide assistance to programs that can contribute help to make progress toward CTR goals. Funding sources may include the following:

- ✓ Trip Reduction Performance Program
- ✓ Vanpool Grant Program
- ✓ Regional Mobility Grant Program
- ✓ Pedestrian and Bicycle Safety Program
- ✓ Safe Routes to Schools Program

SECTION VII: A SUSTAINABLE FINANCIAL PLAN

6. Construction TDM funds

Funds may be available through construction mitigation programs. These programs can be used to enhance the City's CTR program and provide program assistance to CTR work sites or work site cluster.

Source of Funding	Responsible Agency	Estimated Revenue FY 2008	Estimated Revenue FY 2009	Estimated Revenue FY 2010	Estimated Revenue FY 2011	Total Estimated Revenue
CTR Grants	WSDOT	\$.00	\$.00	\$.00	\$.00	\$.00
Other State Funds	WSDOT, CTED	\$.00	\$.00	\$.00	\$.00	\$.00
CMAQ Funds	RTPO	\$.00	\$.00	\$.00	\$.00	\$.00
Local Funds from Operating Budgets	Local Jurisdiction	\$.00	\$.00	\$.00	\$.00	\$.00
Capital Investment Program	Local Jurisdiction	\$.00	\$.00	\$.00	\$.00	\$.00
Transit Revenue	Transit Agency	\$.00	\$.00	\$.00	\$.00	\$.00
Employer Contributions	TMA or Local Jurisdiction	\$.00	\$.00	\$.00	\$.00	\$.00
Developer Contributions	Local Jurisdiction	\$.00	\$.00	\$.00	\$.00	\$.00
Mitigation Funds for Construction Projects	Local Jurisdiction	\$.00	\$.00	\$.00	\$.00	\$.00
TOTAL		\$.00	\$.00	\$.00	\$.00	\$.00

B. Program Expenses

1. *Administration*

Program administration includes activities such as identifying and notifying affected employers, reviewing employer progress reports, evaluating employer programs, coordination with neighboring jurisdictions and transit agencies, conducting the employee survey process, and preparing annual reports on the CTR program.

2. *Facilities*

Facilities include capital elements that help to reduce the number of drive alone trips. Elements include high occupancy vehicle lanes, bicycle lanes, sidewalks, transit signal priority improvements, and bus shelters.

3. *Services*

Services include elements that support transit and ridesharing. Elements include transit services, assistance with the formation of vanpools, car sharing and ride matching services.

4. *Marketing*

Marketing includes activities that help to promote and increase awareness of commute options among commuters and residents. Activities include the development and distribution of transit and ridesharing information, promotional campaigns, web sites to promote commute options programs, and outreach to employers.

5. *Incentives*

Incentives include transit pass discount programs, subsidies for vanpool programs, and other contributions to encourage employers to participate in commute options programs.

6. *Training*

Training includes activities for both employers and local jurisdiction staff. Training may include workshops on various topics to address the CTR law, attendance at conferences and other training opportunities that will help improve program performance.

SECTION VII: A SUSTAINABLE FINANCIAL PLAN

Expense	Responsible Party	Estimated Cost FY 2008	Estimated Cost FY 2009	Estimated Cost FY 2010	Estimated Cost FY 2011	Total Estimated Cost
Prepare local CTR plan and ordinance		\$.00	\$.00	\$.00	\$.00	\$.00
Administer CTR program (contract management, annual reporting, survey process, coordination meetings)		\$.00	\$.00	\$.00	\$.00	\$.00
Training		\$.00	\$.00	\$.00	\$.00	\$.00
Conduct employer outreach		\$.00	\$.00	\$.00	\$.00	\$.00
Implement supporting transit services		\$.00	\$.00	\$.00	\$.00	\$.00
Implement supporting transit facilities		\$.00	\$.00	\$.00	\$.00	\$.00
Implement supporting vanpool services		\$.00	\$.00	\$.00	\$.00	\$.00
Implement bicycle and pedestrian facilities		\$.00	\$.00	\$.00	\$.00	\$.00
Offer program incentives		\$.00	\$.00	\$.00	\$.00	\$.00
Car sharing services		\$.00	\$.00	\$.00	\$.00	\$.00
Conduct special area wide promotions		\$.00	\$.00	\$.00	\$.00	\$.00
Prepare updates to Comprehensive Plans		\$.00	\$.00	\$.00	\$.00	\$.00
Total		\$.00	\$.00	\$.00	\$.00	\$.00

SECTION VII: A SUSTAINABLE FINANCIAL PLAN

C. Financial Gaps

If a jurisdiction identifies additional strategies that would contribute to the success of the plan, but are beyond expected resources, the jurisdiction should identify these additional strategies, what the strategies would accomplish, and what level of funding would be needed to implement the strategies.

Definitions and Example of Following Chart:

Service or Strategy – Service or strategy that is designed to shift commuter behavior from drive alone to non-drive alone travel mode.

Target Market – Population that the service or strategy is focused on, i.e., commuters, residents, students, etc.

Financial Gap – Cost of service or strategy – Available Funds

Potential Funding Source – Source of potential funding for the service or strategy.

Example:

Service or Strategy	Target Market	What Strategy Will Accomplish	Financial Gap (Cost – Available Funds)	Potential Funding Source
Transit pass subsidies for major employers	Commuters who work at CTR-affected work sites.	Increase transit ridership.	\$ 25,000.00	CMAQ funds

Service or Strategy	Target Market	What Strategy Will Accomplish	Financial Gap (Cost – Available Funds)	Potential Funding Source
			\$.00	
			\$.00	
			\$.00	
			\$.00	

SECTION VIII: IMPLEMENTATION STRUCTURE

The jurisdiction is required to describe how its CTR program may be implemented. Many of the programs and services that may be offered may be done in coordination and partnership with other agencies. Under this section, the jurisdiction should describe the various partners that may be part of implementing the Jurisdiction's CTR program and the tasks that they may be performing.

Step 1. *Identify the Organizations and Agencies*

The jurisdiction should identify the various organizations and agencies that may be involved with the jurisdiction's CTR program. Listed below are organizations that may be involved with the implementation of the jurisdiction's CTR Plan. Their roles and responsibilities are described as follows:

A. Local Jurisdiction

Local jurisdictions may be responsible for developing and implementing their local CTR plans. They are responsible for ensuring that CTR plans are consistent with their local comprehensive plans. As part of their CTR plans, local jurisdictions may set the goals and targets for the affected employers. For CTR program administration, local jurisdictions are responsible for ensuring that affected employers are in compliance with the CTR law.

The local jurisdiction may also be responsible for implementing new facilities that are part of the CTR plan. Facilities include sidewalks, bicycle lanes, and street improvements.

B. Contractor

Local jurisdictions may use a contractor for employer outreach, program review and annual reporting of employer progress. The jurisdiction should identify the name of the contractor and their responsibilities and roles.

C. Transit Agency

The transit agency may be responsible for providing transit and ridesharing services to the major employers. In some cases, transit agencies may also conduct employer outreach and develop marketing programs.

D. Transportation Management Association

In some jurisdictions, Transportation Management Associations may be responsible for conducting employer outreach activities, promoting and educating employees about drive alone options and administering special programs, i.e., transit discount programs, guaranteed ride home, etc., that may help affected employers make progress toward meeting their goals.

SECTION VIII: IMPLEMENTATION STRUCTURE

E. Employer

The employer may be responsible for complying with the requirements of the state CTR law. These requirements include designating an employee transportation coordinator, regular distribution of information to employees, regular review of employee commuting and reporting of progress to the local jurisdiction, and implementing a set of measures that may help achieve progress toward meeting CTR goals.

Step 2. Identify CTR Program Tasks and Assign Responsibility

Based on the strategies and services that were identified in Section IV, the jurisdiction should identify the different tasks that are part of the CTR program and assign responsibility to the respective agency that may be performing the tasks. The following table has been provided to help jurisdictions identify the tasks, assign responsibility for completing the various tasks and indicate when the task may be completed.

Note: if the jurisdiction is planning on using a contractor to administer the CTR program on the behalf of the jurisdiction, the jurisdiction should identify the name of the contractor.

CTR Implementation Plan

Program Strategy or Service	Agency Responsible	Scheduled Date for Implementation
Policies and Regulations		
Services and Facilities		
Marketing and Incentive Programs		
Construction Mitigation Programs		

SECTION IX: GROWTH AND TRANSPORTATION EFFICIENCY CENTER PROGRAM

The Washington State legislature enables local jurisdictions to designate growth and transportation efficiency centers. GTECs are urban areas of the state that contain a concentration of jobs and/or population that meet land use and transportation criteria established by the local jurisdictions and applicable RTPPO using CTR Board guidance. The CTR Board intends for state funding and technical assistance to be provided as incentives for local jurisdictions to establish voluntary programs in growth and transportation efficiency centers. Beyond the minimum program requirements, GTEC programs would have wide flexibility in program strategies and administration.

This section is only applicable to a jurisdiction that is applying for a GTEC designation. If a jurisdiction's GTEC is certified by the RTPPO, it will be required to provide a summary of the GTEC plan and incorporate it into the local CTR plan.

For this section, the jurisdiction should indicate whether it is planning to apply for a GTEC program to be certified and if so, attach a map showing where the GTEC is located.



Downtown Seattle contains a high concentration of employment and residents.

OPTIONAL SECTION

One of the challenges facing local jurisdictions is the ability to measure the results of their CTR program and the effects of the program on their transportation system. Local policy makers want to ensure that the investments they have made into CTR have produced positive and measurable results. The purpose of this section is to present a tool that addresses this particular need. **Note: Jurisdictions are not required to estimate the benefits of CTR in their local CTR plans.**

Purpose of the Estimation Tool:

The purpose of the CTR Estimation Tool is to provide local jurisdictions with a way to estimate the effects of the CTR program on their local transportation systems. The tool can be used to calculate the results of their CTR program over a period of time.

Using CTR survey data that is provided by WSDOT, the CTR Estimation Tool calculates two aggregated measures for a jurisdiction's CTR work sites or work site cluster:

1. **Reduction of drive alone trips**
2. **Reduction of vehicle miles traveled per commuter**

The calculated results are compared to the most recent US Census data to determine if there are differences between the results of CTR-affected work sites and jurisdiction-wide non-CTR work sites, or work site cluster, in drive alone trip rates and vehicle miles saved results. The differences between the baseline and the affected CTR work sites, or work site cluster, represent the impacts of CTR program goals on the system.

Using the Tool to Estimate Benefits:

After calculating the number of reduced drive alone trips and vehicle miles traveled per commuter, the jurisdiction can calculate the benefits for reducing vehicle emissions and fuel consumption. These savings are based on coefficients that have been used to estimate benefits for reducing vehicle emissions and fuel consumption.

This tool also provides jurisdictions with the ability to apply the estimated benefits on a broader level using the available CTR work site, or work site cluster, data.

Example: If a jurisdiction wanted to expand the CTR program to other sites, those sites could be included to calculate potential benefits.

The Estimation Tool can also be used to determine mode split goals based on the desired number of drive alone trips that a jurisdiction would like to reduce.

Example: if a jurisdiction has a number of drive alone trips that they would like to reduce, the Estimation Tool can estimate the different mode split goals that are required to accomplish the desired reduction.

SECTION X: ESTIMATING THE BENEFITS OF CTR PROGRAM

Case Study for the City of Kirkland

CTR data from the City of Kirkland was used to illustrate the CTR Estimation Tool by using the available CTR data. The tool estimated the number of drive alone trips and vehicle miles traveled that were reduced at CTR affected work sites. This data was then compared to 2000 US Census data to show the difference between CTR affected work sites and city-wide work sites (see Appendix H).

In 2001, the City of Kirkland had 11 CTR affected work sites. The following observations are based on the 2001 CTR survey results:



Kirkland City Hall

Drive Alone Trips:

- 1,344 full time CTR affected employees
- The percentage of drive alone trips is 65% based on only the employees that arrived between 6:00 am and 9:00 am – as calculated by the CTR Estimation Tool.
- By using the 2000 US Census data, the drive alone rate for the entire City of Kirkland employee population is 76%.

Result: The difference between CTR affected and city wide drive alone trips is 11% which shows that the CTR program has had a positive effect on City of Kirkland CTR work sites or work site cluster.

Vehicle Miles Traveled:

- 72,188 miles was the number discerned by using the 2001 CTR data for vehicle miles traveled amongst CTR affected employees. The VMT rate among CTR affected employees is 10.8 miles per commuter (72,188/1339 commuters) per day.
- 79,082 miles was the number estimated using the 2000 US Census data for the entire City of Kirkland. The VMT rate among all employees in the City of Kirkland is 11.8 miles per commuter (79,082/1339 commuters) per day.

Result: The difference between CTR affected work sites and city-wide work sites was 6,894 miles. This difference shows that the CTR program has had a positive effect on CTR work sites or work site cluster.

Estimation of Benefits of CTR on Transportation System:

The reductions in vehicle miles traveled amongst CTR work sites, or work site cluster, can be translated into benefits for the entire transportation system. Two benefits that can be calculated are:

1. **The amount of pollutants that were reduced:**
 - **Criteria Pollutants Reduced = 8,765 lbs. (6,894 miles x 1.27*)**
2. **The amount of gasoline that was saved by commuters:**
 - **Fuel Consumption Reduction = 335 gallons (.04852* x 6,894 miles)**

Summary of Benefits

The City of Kirkland has been working with eleven CTR affected work sites. In 2001, there were a total of 1,339 full time affected employees. That same year, these employees were surveyed and 65% of the surveyed employees accounted for drive alone trips. Using the 2000 US Census to compare the CTR affected employees with the non-CTR affected employees jurisdiction wide, the difference was 11%.

Looking at vehicle miles traveled rates, there was also a significant difference between CTR affected employees and non-CTR affected employees. CTR affected commuters had a lower VMT rate of 54 miles per commuter per week compared to the average commuter in the City of Kirkland which had a VMT rate of 59 miles per commuter per week.

The benefits to the transportation system can also be measured in the reduction of pollutants and usage of gasoline. CTR affected employee commuters reduced carbon monoxide pollutants by 8,765 lbs. and reduced the consumption of gasoline by 335 gallons.

Additional Applications of the CTR Estimation Tool:

The CTR Estimation Tool can be expanded to determine the impacts of the CTR program on all employees or on different sub groups.

Example: The City of Kirkland example only applied to CTR affected employees. If the jurisdiction wanted to include all full-time employees, regardless of whether or not the commute to work takes place between 6:00 am and 9:00 am, the filter used in the calculation pages can be changed to accommodate the additional information.

Example: As an expanded example, include off-peak commuters as a separate sub-group and have the ability to examine the impact that CTR has on the off-peak commuter sub-group (or whichever group is chosen).

* This number is based on a vehicle miles traveled study provided by WSDOT.

SECTION X: ESTIMATING THE BENEFITS OF CTR PROGRAM

The CTR Estimation Tool is flexible enough to accommodate future changes to the CTR Survey questionnaire as it changes over time. The tool can be easily adjusted to accommodate the changes and still be used to estimate CTR program benefits.

HINT:

To see a full description of the CTR Estimation Tool, please see Appendix H.

APPENDIX A

Commute Trip Reduction Efficiency Act Legislation

APPENDIX B

Commuter Trip Reduction Efficiency Act Program Rules

APPENDIX C

Contacts and Data Sources

APPENDIX D

How to Prepare a GIS Analysis

APPENDIX E

How to Prepare an Assessment of Transportation Conditions

APPENDIX F

How to Prepare an Assessment of Transit Conditions

APPENDIX G

Comprehensive Planning Policies

APPENDIX H

How to Estimate the Benefits of the CTR Program